#### **DECLARATION FOR PATENT APPLICATION**

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled ATP-BINDING TRANSPORTER (ABC7) AND METHODS FOR DETECTION OF ANEMIA AND ATAXIA, the specification of which

$\boxtimes$	is attached hereto.
	was filed on as United States Application No
	was described and claimed in PCT International Application No, filed on, and as amended under PCT Article 19 on (if applicable).
	and was amended on (if applicable).
	with amendments through (if applicable).
including	I hereby state that I have reviewed and understand the contents of the above-identified specification, the claims, as amended by any amendment referred to above.
in 35 U.S. application occurred b	I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, ederal Regulations, § 1.56. If this is a continuation-in-part application filed under the conditions specified C. § 120 which discloses and claims subject matter in addition to that disclosed in the prior copending n, I further acknowledge the duty to disclose material information as defined in 37 CFR § 1.56 which between the filing date of the prior application and the national or PCT international filing date of the on-in-part application.
country of application country of	I hereby claim foreign priority benefits under Title 35, United States Code, § 119(a)-(d) of any foreign n(s) for patent or inventor's certificate or of an PCT International application(s) designating at least one her than the United States of America listed below and have also identified below any foreign n(s) for patent or inventor's certificate or any PCT International application(s) designating at least one her than the United States of America filed by me on the same subject matter having a filing date before application(s) on which priority is claimed:

Prior Foreign Application(s)	Country	Filing Date	Priority Claimed	
			☐ Yes ☐ No	

I hereby claim the benefit under Title 35, United States Code, § 119(e) of any United States provisional application(s) listed below:

Application No.	Filing Date		
60/105,497	October 23, 1998		

I hereby claim the benefit under Title 35, United States Code, § 120 of any United States application(s) or § 365(c) of any PCT International application(s) designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of Title 35, United States Code, § 112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, § 1.56(a)

TMH/DAG:lam 01/21/04 246127

Post Office Address:

which occurred between the filing date of the prior application and the national or PCT International filing date of this application:

Application No.	Filing Date	Status: patented, pending, abandoned
09/422,840	October 21, 1999	Pending

Address all telephone calls to Tanya M. Harding, Ph.D., telephone number 503/226-7391 and facsimile number 503/228-9446.

## Address all correspondence to Customer Number 36218:

KLARQUIST SPARKMAN, LLP One World Trade Center, Suite 1600 121 SW Salmon Street Portland, OR 97204-2988

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full Name of F	irst (or sole) Inventor: Michael C. Dean	
Inventor's Sign	ature	Date
Residence:	1362 Hitchingpost Lane Frederick, MD 21703	Date
Citizenship:	The United States of America	
Post Office Ad	dress: NIH/NCI-FCRDC Building 560, Room 21-18 Frederick, MD 21703	
Full Name of S	econd Joint Inventor: Amy Ann Hutchinson	
Inventor's Sigr	nature	Date
Residence:	3011 Edwin Avenue #2G Fort Lee, NJ 07024	Date
Citizenship:	The United States of America	

3011 Edwin Avenue #2G Fort Lee, NJ 07024 TMH/DAG:lam 01/21/04 246127

Full Name of Third Joint Inventor: Rando Lembit Allikmets

Inventor's Signature

Date

Residence:

200 Maple Road

Cornwall-on-Hudson, NY 12520

Citizenship:

Estonian

Post Office Address:

Department of Ophthalmology

Columbia University

Eye Research Institute, Room 715

630 West 168th Street New York, NY 10032

#### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of Dean et al.

Application No. 09/422,840

Filed: October 21, 1999

For: ATP-BINDING TRANSPORTER (ABC7) AND METHODS FOR DETECTION OF

ANEMIA AND ATAXIA

Date: September 18, 2002

# SUBSTITUTE POWER OF ATTORNEY AND CHANGE OF CORRESPONDENCE ADDRESS

Dear Sir:

The assignee of record, the Government of the United States of America, as Represented by the Secretary, Department of Health and Human Services hereby revokes all former Powers of Attorney and appoint the following attorneys and agents as its representatives to conduct all business in the Patent and Trademark Office connected therewith:

Name	Reg. No.	Name	Reg. No.
James C. Haight	25,588	Jack Spiegel	34,477
Susan S. Rucker	35,762	David R. Sadowski	32,808
John Peter Kim	38,514	Steven Ferguson	38,448
Stephen L. Finley	36,357	Norbert J. Pontzer	40,777
Richard R. Rodriguez	45,980	Marlene Shinn	46,005

all of the National Institutes of Health, Office of Technology Transfer, Rockville, Maryland 20852-3804; and Associate Power of Attorney to:

Name	Reg. No.	Name	Reg. No.
John W. Stuart	24,540	Michael D. Jones	41,879
Richard J. Polley	28,107	Tanya M. Harding	42,630
William D. Noonan	30,878	Susan Alpert Siegel	43,121
Donald L. Stephens Jr.	34,022	Gregory L. Maurer	43,781
Wayne W. Rupert	34,420	Gillian L. Bunker	47,461
Stacey C. Slater	36,011	Anne Carlson	47,472
Stephen A. Wight	37,759	Sheree L. Rybak	47,913
Robert F. Scotti	39,830	Devon J. Zastrow	50,206
Lisa M. Caldwell	41,653		

all of the law firm of Klarquist Sparkman, LLP, 121 SW Salmon Street, Suite 1600, Portland, Oregon 97204.

Please address all correspondence to William D. Noonan, M.D. at:

KLARQUIST SPARKMAN, LLP One World Trade Center, Suite 1600 121 SW Salmon Street Portland, OR 97204-2988 Telephone: 503-226-7391

Fax: 503-228-9446

The Assignment referred to in this Substitute Power of Attorney has been reviewed by the undersigned. The undersigned certifies that to the best of the undersigned's knowledge and belief, title is in the assignee. A copy of the Assignment is attached hereto.

The National Institutes of Health National Institutes of Health Office of Technology Transfer has been duly delegated responsibility for such patent matters under the authority of the Department of Health and Human Services Secretary Louis W. Sullivan's May 21, 1991 memorandum appearing in the Friday, June 7, 1991 Federal Register Notices at Volume 56, Number 110, pages 26418-26419, a copy of which is attached. The undersigned is authorized to exercise such authority in this matter.

Executed on Sept. 27, 2002, at Rockville, Maryland.

UNITED STATES DEPARTMENT OF HEALTH AND HUMAN SERVICES

By:

\_. .

Name:

Registration No.

10,000

For:

Mark Rohrbaugh, Ph.D., J.D.

Acting Director, Office of Technology Transfer

National Institutes of Health 6011 Executive Blvd., Suite 325 Rockville, MD 20852-3804 Telephone: (301) 496-7056 WDN/TMH:jlb 4239-63609 E-181-98/0 08/14/02



200 Maple Road Cornwall- on- Hudson, NY 12522

### ASSIGNMENT

WHEREAS, we, Michael Dean, of 1362 Hitchingpost Lane, Frederick, MD 21703, a citizen of the United States of America, Rando Allikmets, of 8-J Old Country Road, Lamplight Village, Monroe, NY 10950, a citizen of Estonia, and Amy Ann Hutchinson, of 3011 Edwin Avenue #2G, Fort Lee, NJ 07024, a citizen of the United States of America, employees of the Department of Health and Human Services at the time the invention was made, have invented ATP-BINDING TRANSPORTER (ABC7) AND METHODS FOR DETECTION OF ANEMIA AND ATAXIA for which the following patent applications have been filed:

U.S. Provisional Patent Application No. 60/105,497, filed on October 23, 1998; and

U.S. Application No. 09/422,840 filed on October 21, 1999;

both of which applications are collectively referred to herein as "the patent applications."

WHEREAS, the conditions under which said invention was made are such as to entitle the Government of the United States of America under Paragraph 1(a) of Executive order 10096, to the entire right, title, and interest, both domestic and foreign, of the invention and patent applications; and

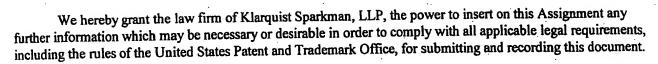
WHEREAS, the Government of the United States of America is desirous of acquiring all domestic and foreign right, title, and interest in the aforesaid invention described in the aforesaid patent applications as well as any Letters Patent of the United States of America issuing therefrom; and

NOW, THEREFORE, to all whom it may concern, be it known for and in consideration of the premises and other valuable considerations, we the undersigned, have sold, assigned, and transferred and by these presents do sell, assign, and transfer unto The Government of the United States of America as represented by the Secretary of the Department of Health and Human Services (hereinafter THE GOVERNMENT), and their successors, the full and exclusive right, title, and interest in the invention, patent applications and patent rights throughout the United States of America, its territories and dependencies, and within each and every foreign country in which THE GOVERNMENT elects to file the invention described in the aforesaid patent applications, all rights in the invention and the patent applications, and all Letters Patents and Registrations which may be granted on the same in the United States of America and all countries throughout the world, and to claim the priority from the patent applications as provided by United States law and the Paris Convention, or of any divisional, renewal, continuation in whole or in part, substitution, conversion, reissue, prolongation or extension thereof.

AND, we hereby authorize and request the Commissioner for Patents to issue said Letters Patent or Patents to THE GOVERNMENT as an assignee of the entire right, title, and interest in and to the same throughout the United States of America, its territories and dependencies, and within each and every foreign country in which THE GOVERNMENT elects to file, for the sole use for the full term or terms for which said Letters Patent or Patents and Registrations may be granted thereon, or of any division, renewal, continuation in whole or in part, substitution, conversion, reissue, prolongation or extension thereof which may be granted as fully and entirely as the same would have been held by us, had this assignment not been made;

AND, we hereby warrant that there are no outstanding assignments, grants, liens, encumbrances, or agreements either written, oral, or implied with respect to the aforesaid patent applications which will impair, diminish, limit, or abridge the interest herein conveyed at the time of the execution of this instrument by us;

AND, we hereby agree to execute any and all applications for Letters Patent in the United States of America and foreign countries, and to furnish and deliver to the Secretary, Department of Health and Human Services, upon request, all data and documents, and to execute any papers which may be necessary for the prosecution of any application or applications of Letters Patent or for THE GOVERNMENT to exercise its rights granted hereunder, including communicating to THE GOVERNMENT, its representatives or agents, any facts relating to said invention, including evidence for interference purposes, or for other proceedings, whenever requested, to testify in any interference or other proceedings, whenever requested, and to execute and deliver on request all lawful papers required to make any of the foregoing provisions effective, and likewise make these provisions binding upon our heirs, legal representatives, administrators and assigns, and we shall assist THE GOVERNMENT in every way as may be requested in protecting said invention, provided that any expense of extending such assistance shall be paid by THE GOVERNMENT.



IN TESTIMONY WHEREOF, Assignors have signed their names on the dates indicated.

Dated: 9/3/08	<del>)</del>		Michael Dean	M.	· · · · ·	
STATE OF <u>The</u>	yland) ) ss.					
•	y of <u><b>sept</b>.</u> ng Assignment in n	ny presence, a	me personally came nd who acknowledg	e the above-na ed to me that h	med Michae ne executed t	l Dean, who he same of
	<i>.</i>		Notary Public for My commission ex	Roges Marylan pires: 04/	201105	i .
[SEAL]	*					
Dated:		· · · · · · · · · · · · · · · · · · ·	Rando Allikmets			
STATE OF	) ss.					
This da who executed the fo of his own free will	y of pregoing Assignment for the purposes se	nt in my preser	e me personally cam nce, and who acknow	e the above-na wledged to me	amed Rando that he exec	Allikmets, uted the same
			Notes Dublin Co.		·	
·			Notary Public for My commission e			
[SEAL]						

We hereby grant the law firm of Klarquist Sparkman, LLP, the power to insert on this Assignment any further information which may be necessary or desirable in order to comply with all applicable legal requirements, including the rules of the United States Patent and Trademark Office, for submitting and recording this document.

IN TESTIMONY WHEREOF, Assignors have signed their names on the dates indicated.

Dated:			<u> </u>
Dates.	Michael Dean	- Ye	
STATE OF	•		••
COUNTY OF			
This day of, 2002, before executed the foregoing Assignment in my presence, a	e me personally came th and who acknowledged	e above-named N to me that he exe	Aichael Dean, who cuted the same of
his own free will for the purposes set forth therein.			
	Notary Public for		
	My commission expi	res:	*
[SEAL]			
	1		•
	10m	-1	
Dated: 9/18/02	Rando Allikmets		
COUNTY OF here your ) 88.	4.1	e e	
COUNTY OF hew both			
This 18 day of , 2002, before who executed the foregoing Assignment in my prese of his own free will for the purposes set forth therein	nce, and who acknowle	he above-named ladged to me that h	Rando Allikmets, he executed the same
	Patrician	Tobiasia	? <i>.</i>
	Notary Public for		Late
[SEAL]	Notary Pu Qualified	'9!CIA TOBIASEN blic State of New in West theater Co	ounty

No 4851145 Commission Expires Feb. 17, 2.004 Dated: 8/29/02

amy Ann Hutchinson

STATE OF

MD

SS.

COUNTY OF Montgowery

This 28 day of August, 2002, before me personally came the above-named Amy Ann Hutchinson, who executed the foregoing Assignment in my presence, and who acknowledged to me that he executed the same of his own free will for the purposes set forth therein.

Notary Patric for

My commission expires: 2/

[SEAL]